



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0377; Project Identifier MCAI-2021-00380-R; Amendment 39-21674; AD 2021-16-12]

RIN 2120-AA64

Airworthiness Directives; Bell Textron Canada Limited Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Bell Textron Canada Limited Model 505 helicopters. This AD was prompted by three occurrences of metallic debris in the engine oil lubrication system causing the 12 volts direct current (VDC) reference voltage to be shorted to ground and loss of important flight information to the pilot. This AD requires replacing a certain part-numbered relay panel assembly. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain document listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Bell Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4, Canada; telephone (450) 437-2862 or (800) 363-8023; fax (450) 433-0272; email productsupport@bellflight.com; or at <https://www.bellflight.com/support/contact-support>. You may view the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at <https://www.regulations.gov> by searching for and

locating Docket No. FAA-2021-0377.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0377; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the Transport Canada AD, any comments received, and other information. The street address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Hal Jensen, Aerospace Engineer, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 950 L'Enfant Plaza N SW, Washington, DC 20024; telephone (202) 267-9167; email hal.jensen@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to Bell Textron Canada Limited Model 505 helicopters, with serial numbers 65011 through 65023 inclusive, 65025 through 65028 inclusive, 65030 through 65032 inclusive, 65034, and 65036 with relay panel assembly part number (P/N) SLS-075-002-107 installed. The NPRM published in the *Federal Register* on May 25, 2021 (86 FR 28038). In the NPRM, the FAA proposed to require replacing relay panel assembly part number P/N SLS-075-002-107 with relay panel assembly P/N SLS-075-002-109. The NPRM also proposed to prohibit installing relay panel assembly P/N SLS-075-002-107 on any helicopter. The NPRM was prompted by Canadian AD CF-2017-36, dated December 15, 2017 (Canadian AD CF-2017-36), issued by Transport Canada, which is the aviation authority for Canada, to correct an unsafe condition for Bell Helicopter Textron Canada Limited (BHTCL) (now Bell Textron Canada Limited) Model 505 helicopters serial numbers 65011 through 65023, 65025 through 65028, 65030 through 65032, 65034, and 65036. Transport Canada advises of three occurrences of metallic debris in the engine oil lubrication system of the Model 505

helicopter causing the Garmin Engine Airframe (GEA) 12 VDC reference voltage to be shorted to ground. This short to ground results in loss of display of important flight information including the main rotor rotations per minute (Nr), fuel quantity, and transmission oil pressure and temperature, and the generator voltage and ammeter parameters are marked invalid with a red “X” on the primary flight display (PFD) and the multi-function display (MFD). This condition, if not addressed, could result in loss of caution, advisory, and system performance indications for multiple helicopter systems, particularly when the initiating event may be the activation of the engine chip detector.

Accordingly, Canadian AD CF-2017-36 requires replacing relay panel assembly P/N SLS-075-002-107 with relay panel assembly P/N SLS-075-002-109.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the costs.

Conclusion

These helicopters have been approved by the aviation authority of Canada and are approved for operation in the United States. Pursuant to the FAA’s bilateral agreement with Canada, Transport Canada, its technical representative, has notified the FAA of the unsafe condition described in its AD. The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these helicopters. Except for minor editorial changes and updating the email and website addresses for Bell Textron Canada Limited throughout this document, this AD is adopted as proposed in the NPRM.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Bell Helicopter Alert Service Bulletin 505-17-04, dated December 6, 2017 (ASB 505-17-04). ASB 505-17-04 specifies procedures for replacing relay panel assembly P/N SLS-075-002-107 with relay panel assembly P/N SLS-075-002-109. ASB 505-17-04 also specifies procedures for accomplishing a functional test of the two engine electrical magnetic plugs and provides a notice to ensure 505-FM-1 (TR-2) is inserted into the flight manual.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Differences Between this AD and the Transport Canada AD

Canadian AD CF-2017-36 requires replacing the relay panel assembly within 25 hours air time or 30 days, whichever occurs first, whereas this AD requires that replacement within 25 hours time-in-service instead. Canadian AD CF-2017-36 applies to certain serial-numbered Model 505 helicopters, whereas this AD applies to certain serial-numbered Model 505 helicopters with relay panel assembly P/N SLS-075-002-107 installed instead.

Costs of Compliance

The FAA estimates that this AD affects 3 helicopters of U.S. Registry. The FAA estimates that operators may incur the following costs in order to comply with this AD. Labor costs are estimated at \$85 per work-hour.

Replacing each relay panel assembly takes about 3 work-hours and parts cost \$7,079 for an estimated cost of \$7,334 per helicopter and \$22,002 for the U.S. fleet.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on helicopters identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-16-12 Bell Textron Canada Limited: Amendment 39-21674; Docket No. FAA-2021-0377; Project Identifier MCAI-2021-00380-R.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bell Textron Canada Limited Model 505 helicopters, certificated in any category, with serial numbers (S/Ns) 65011 through 65023 inclusive,

65025 through 65028 inclusive, 65030 through 65032 inclusive, 65034, and 65036 with relay panel assembly part number (P/N) SLS-075-002-107 installed.

Note 1 to paragraph (c): Helicopters with S/Ns 65011 through 65023 inclusive, 65025 through 65028 inclusive, 65030 through 65032 inclusive, 65034, and 65036 are known to have had relay panel assembly P/N SLS-075-002-107 installed during production.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 3110, Instrument Panel.

(e) Unsafe Condition

This AD was prompted by three occurrences of metallic debris in the engine oil lubrication system causing a short to ground within the engine chip detector. The FAA is issuing this AD to prevent failure of the 12 volts direct current (VDC) reference voltage, loss of display of important flight information to the pilot including the main rotor rotations per minute (Nr), fuel quantity, and transmission oil pressure and temperature, and the generator voltage and ammeter parameters as marked invalid with a red “X” on the primary flight display (PFD) and the multi-function display (MFD). The unsafe condition, if not addressed, could result in simultaneous loss of caution, advisory, and system performance indicators for multiple systems.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Within 25 hours time-in-service after the effective date of this AD, replace relay panel assembly P/N SLS-075-002-107 with relay panel assembly P/N SLS-075-002-109 by following the Accomplishment Instructions, paragraphs 1.a. through 3, of Bell Helicopter Alert Service Bulletin 505-17-04, dated December 6, 2017.

(2) As of the effective date of this AD, do not install relay panel assembly P/N SLS-075-002-107 on any helicopter.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (i)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

(1) For more information about this AD, contact Hal Jensen, Aerospace Engineer, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 950 L'Enfant Plaza N SW, Washington, DC 20024; telephone (202) 267-9167; email hal.jensen@faa.gov.

(2) The subject of this AD is addressed in Transport Canada AD CF-2017-36, dated December 15, 2017. You may view the Transport Canada AD at <https://www.regulations.gov> in Docket No. FAA-2021-0377.

(j) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Bell Helicopter Alert Service Bulletin 505-17-04, dated December 6, 2017.

(ii) [Reserved]

(3) For Bell Helicopter service information identified in this AD, contact Bell Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4, Canada; telephone (450) 437-2862 or (800) 363-8023; fax (450) 433-0272; email productsupport@bellflight.com; or at <https://www.bellflight.com/support/contact-support>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on July 27, 2021.

Ross Landes, Deputy Director for Regulatory Operations,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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